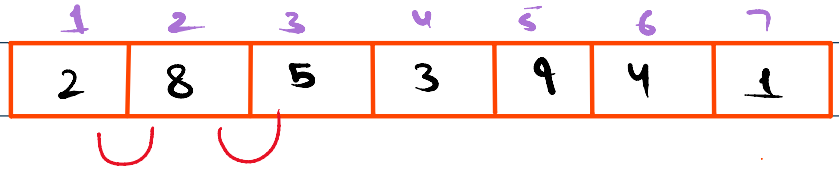
Bubble Sort

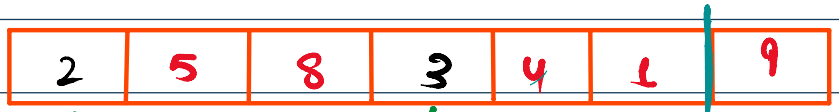
Tuesday, September 21, 2021 9:02 PM

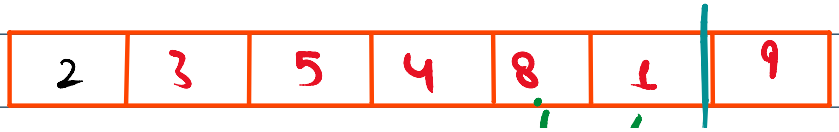
Bubble Sort

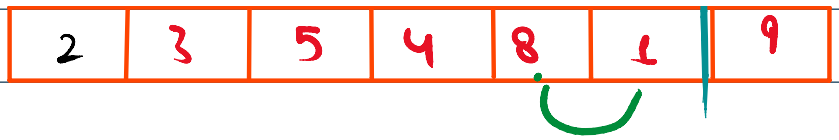
Is an algorithm to arrange an array in either ascending or descending order.



Ascending Order






2 3 5 4 8 1 9

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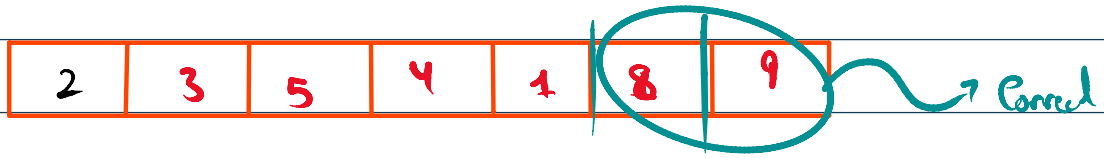
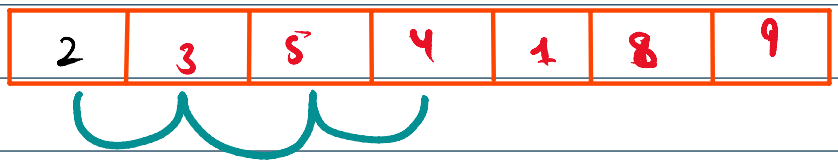
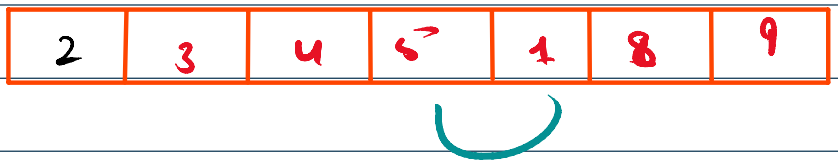

2 3 5 4 1 8 9
Correct


2 3 5 4 1 8 9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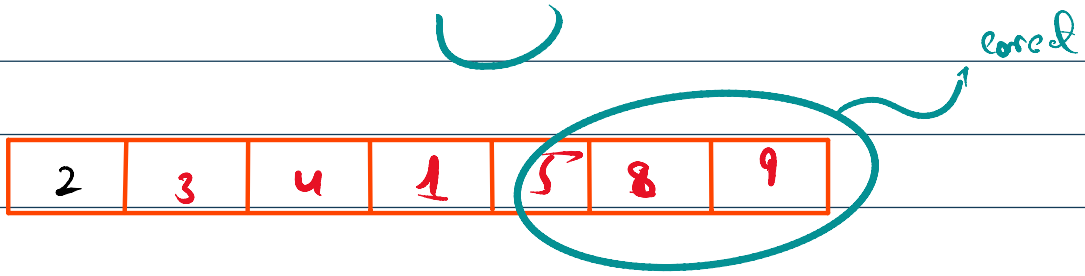
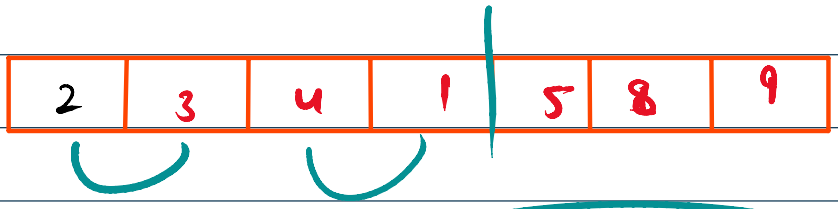
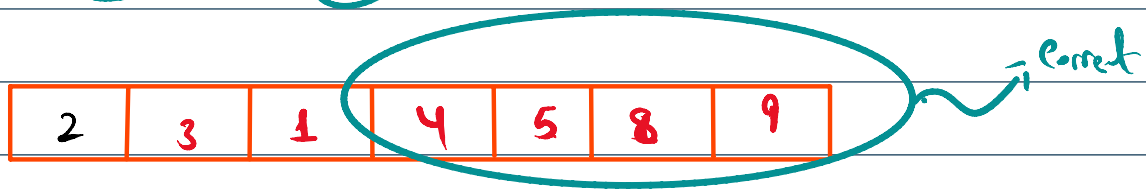

correct
2 3 4 1 5 8 9


2 3 4 1 5 8 9


2 3 1 4 5 8 9
Correct

1 2 3 4 5 8 9

Swapping Variables

$x = 70$

$y = 50$

$y = x$
$x = y$ } Discuss Problem

Temp = x

x = y

y = Temp

Efficient Bubble Sort

- An array contain 100 Elements (Student ID)

```
Boundary = 99
Repeat
    Noswaps = True
    For J = 1 to Boundary
        If studentID[J] > studentID[J+1]
            Then
                Temp = studentID[J]
                studentID[J] = studentID[J+1]
                studentID[J+1] = Temp
```

```
            studentID[J+1] = Temp
            NoSwaps = False
        ENDIF
    ENDFOR
    Boundary = Boundary - 1
UNTIL NoSwaps = True
```